STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING								AMENDEI	FORI D REPORT						
APPLICATION FOR PERMIT TO DRILL								1. WELL NAME and NUMBER FD 2-4-6-19							
2. TYPE C	F WORK	DRILL NEW W	/ELL (Tall) REENTEI	R P&A WE	:LL (DEEPEN	IWELL [<u> </u>			3. FIELD OR WILDCAT	T MOFFAT C	ANAL		
4. TYPE O	F WELL	DICIEL IVE VV	Oil W				· · · · · · · ·	<u> </u>			5. UNIT or COMMUNIT			NT NAME	Ē
6. NAME	OF OPERATO	R	Oli vv		RRETT C	ethane Well: NO					7. OPERATOR PHONE	303 312-8	2124		
8. ADDRE	SS OF OPERA		1000 18			enver, CO, 80202					9. OPERATOR E-MAIL			m	
	RAL LEASE NU L, INDIAN, OR	JMBER	1033 10	our oureet ole	11.	MINERAL OWNERS	-	· · · · · ·	<u> </u>		12. SURFACE OWNERS	SHIP	-		-@
·		fee E OWNER (if bo)	x 12 = 'fo	ee')		EDERAL INI	DIAN () STATE(J '	FEE (III)	FEDERAL INI	DIAN ()	STATE (E((())
		ACE OWNER (if	box 12	GLENN AND							16. SURFACE OWNER	435-247-2	2336	·	
17 INDIA	N ALL OTTEE	OR TRIBE NAME		PO BOX 154, I		T, UT 84039	MINGLE	PRODUCTIO	N FROI	м	19. SLANT				
	2 = 'INDIAN')	OR TRIBE NAME			- 1	LTIPLE FORMATIO		gling Applicat	ion) I	NO 📵	VERTICAL (1) DIF	RECTIONAL) но	RIZONTA	AL 🔵
20. LOC	ATION OF WE	LL			FOOTA	GES	Q	TR-QTR		SECTION	TOWNSHIP	RAN	GE	MEF	RIDIAN
LOCATIO	ON AT SURFA	CE		66	1 FNL 1	980 FEL		NWNE	7	4	6.0 S	19.0	E		S
Top of U	Jppermost Pr	oducing Zone			1 FNL 1		—	NWNE		4	6.0 S	19.0	E		S
At Total				66	1 FNL 1			NWNE		4	6.0 S	19.0			S
21. COUN	NTY	UINTAH				DISTANCE TO NEA	6	59	·		23. NUMBER OF ACRE	640	ING UNIT		
25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling of Completed) 637					-	26. PROPOSED DEPTH MD:		VD: 10500)						
			27. ELEVATION - GROUND LEVEL 28. BOND NUMBER					037							
27. ELEV	ATION - GRO	UND LEVEL			28.	BOND NUMBER		.138148			29. SOURCE OF DRIL WATER RIGHTS APPR		BER IF API	PLICABL	E
27. ELEV	ATION - GRO				28.		LMP4	138148	ormat	ion		OVAL NUME	BER IF API	PLICABL	E
27. ELEV	ATION - GROU			ength	28. Weigh	Hole, Casing	LMP4	138148		ion		OVAL NUME	BER IF API	PLICABL	E Weight
		5273		ength 0 - 80		Hole, Casing	LMP4 g, and (read	138148 Cement Info		ion	WATER RIGHTS APPR	OVAL NUME	BER IF API		
String	Hole Size	5273 Casing Size			Weigh	Hole, Casing	LMP4 g, and (read	138148 Cement Info Max Mud V		Hallibur	Cement No Used ton Light , Type Unl	49-164 known	Sacks 0 200	Yield	Weight 0.0 11.0
String COND SURF	Hole Size 26 12.25	5273 Casing Size 16	0	0 - 80 - 1500	Weigh 65.0 36.0	Hole, Casing t Grade & Th	LMP4 g, and (read n	.138148 Cement Info Max Mud V 8.7 8.7		Hallibur Halliburtoi	Cement No Used ton Light , Type Unl	49-164 known	Sacks 0 200 240	Yield 0.0 3.16 1.36	0.0 11.0 14.8
String COND	Hole Size	5273 Casing Size 16	0	0 - 80	Weigh	Hole, Casing t Grade & Th	LMP4 g, and (read n	.138148 Cement Info Max Mud V 8.7		Hallibur Halliburtor Hallibur	Cement No Used ton Light , Type Union Light , Type	49-164 known Jnknown known	Sacks 0 200 240 690	Yield 0.0 3.16 1.36 2.31	0.0 11.0 14.8 11.0
String COND SURF	Hole Size 26 12.25	5273 Casing Size 16	0	0 - 80 - 1500	Weigh 65.0 36.0	Hole, Casing of Grade & The Unknow J-55 ST8	LMP4 g, and (read n kC &C	.138148 Cement Info Max Mud V 8.7 8.7		Hallibur Halliburto Hallibur Halliburto	Cement No Used ton Light , Type Unl	known Jnknown Jnknown	Sacks 0 200 240	Yield 0.0 3.16 1.36	0.0 11.0 14.8
String COND SURF	Hole Size 26 12.25 8.75	5273 Casing Size 16 9.625 7	0	0 - 80 - 1500 - 8836	Weigh 65.0 36.0	Hole, Casing of Grade & The Unknow J-55 ST8 P-110 LT	LMP4 g, and (read n kC &C &C	138148 Cement Info Max Mud V 8.7 8.7 10.0		Hallibur Halliburto Hallibur Halliburto	Cement No Used ton Light , Type Unin Premium , Type Unin Dremium	known Jnknown Jnknown	Sacks 0 200 240 690 160	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0 13.5
String COND SURF	8.75 6.125	5273 Casing Size 16 9.625 7 4.5	0 0 863	0 - 80 - 1500 - 8836 6 - 10500	Weigh 65.0 36.0 26.0	Hole, Casing of Grade & The Unknow J-55 ST8	LMP4 g, and G read n &C &C &C ATTACI	138148 Cement Info Max Mud V 8.7 8.7 10.0 12.5 HMENTS	Vt.	Hallibur Halliburtor Halliburtor Halliburtor	Cement No Used ton Light , Type Unin Premium , Type Unin Dremium	known Jnknown known Jnknown Jnknown Jnknown	Sacks 0 200 240 690 160 240	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0 13.5
String COND SURF	Hole Size 26 12.25 8.75 6.125	5273 Casing Size 16 9.625 7 4.5	0 0 863	0 - 80 - 1500 - 8836 6 - 10500	Weigh 65.0 36.0 26.0	Hole, Casing of Grade & The Unknow J-55 ST8 P-110 LT	LMP4 g, and G read n &C &C &C ATTACI	138148 Cement Info Max Mud V 8.7 8.7 10.0 12.5 HMENTS	AH OII	Hallibur Halliburtor Halliburtor Halliburtor	Cement No Used ton Light , Type Unl n Premium , Type U	known Jnknown known Jnknown Jnknown Jnknown	Sacks 0 200 240 690 160 240	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0 13.5
String COND SURF	Hole Size 26 12.25 8.75 6.125	5273 Casing Size 16 9.625 7 4.5	0 0 863	0 - 80 - 1500 - 8836 6 - 10500 NG ARE AT	Weigh 65.0 36.0 26.0 13.5	Hole, Casing at Grade & The Unknown J-55 ST8 P-110 LT. P-110 LT. A D IN ACCORDANCE ENGINEER	LMP4 g, and G read n &C &C &C ATTACI	138148 Cement Info Max Mud V 8.7 8.7 10.0 12.5 HMENTS	AH OII	Halliburtor Halliburtor Halliburtor Halliburtor Halliburtor	Cement No Used ton Light , Type Unl n Premium , Type U	known Jnknown Jnknown Jnknown Jnknown	Sacks 0 200 240 690 160 240	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0 13.5
String COND SURF I1 L1 AP	Hole Size 26 12.25 8.75 6.125 VE	5273 Casing Size 16 9.625 7 4.5 ERIFY THE FOL	0 8630	0 - 80 - 1500 - 8836 6 - 10500 NG ARE AT ENSED SURV	Weigh 65.0 36.0 26.0 13.5 TACHE	Hole, Casing at Grade & The Unknown J-55 ST8 P-110 LT. P-110 LT. A D IN ACCORDANCE ENGINEER	LMP4 g, and G read n &C &C &C ATTACI	138148 Cement Info Max Mud V 8.7 8.7 10.0 12.5 HMENTS TH THE UTA FORM	AH OII	Halliburtor Halliburtor Halliburtor Halliburtor Halliburtor	Cement No Used ton Light , Type Uni n Premium , Type Uni n Premium , Type Uni n Premium , Type U n Premium , Type U CONSERVATION G	known Jnknown Jnknown Jnknown Jnknown	Sacks 0 200 240 690 160 240	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0 13.5
String COND SURF I1 L1 L1 L1 DI	Hole Size 26 12.25 8.75 6.125 VE	5273 Casing Size 16 9.625 7 4.5 ERIFY THE FOL	0 8630	0 - 80 - 1500 - 8836 6 - 10500 NG ARE AT ENSED SURV	Weigh 65.0 36.0 26.0 13.5 TACHE	Hole, Casing of Grade & The Unknow J-55 ST8 P-110 LT6 P-	LMP4 g, and 0 read n kC &C ATTACI NCE WI	138148 Cement Info Max Mud V 8.7 8.7 10.0 12.5 HMENTS ITH THE UTA FORM	AH OII	Halliburtor Halliburtor Halliburtor Halliburtor Halliburtor L AND GAS DRILLING PI OPERATOR IS	Cement No Used ton Light , Type Uni n Premium , Type Uni n Premium , Type Uni n Premium , Type U n Premium , Type U CONSERVATION G	known Jnknown Jnknown Jnknown Jnknown	Sacks 0 200 240 690 160 240	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0 13.5
String COND SURF I1 L1 L1 L1 DI	Hole Size 26 12.25 8.75 6.125 VE	5273 Casing Size 16 9.625 7 4.5 ERIFY THE FOL	0 8630	0 - 80 - 1500 - 8836 6 - 10500 NG ARE AT ENSED SURV	Weigh 65.0 36.0 26.0 13.5 TACHE	Hole, Casing of Grade & The Unknow J-55 ST8 P-110 LT6 P-110 LT7 A D IN ACCORDAN R ENGINEER FEE SURFACE)	LMP4 g, and 0 read n &C &C ATTACI NCE WI	138148 Cement Info Max Mud V 8.7 8.7 10.0 12.5 HMENTS ITH THE UTA FORM	AH OII	Hallibur Halliburtor Halliburtor Halliburtor Halliburtor Halliburtor C AND GAS E DRILLING PI OPERATOR IS PHICAL MAP	Cement No Used ton Light , Type Uni n Premium , Type Uni n Premium , Type Uni n Premium , Type U n Premium , Type U CONSERVATION G	known Jnknown Jnknown Jnknown Jnknown	Sacks 0 200 240 690 160 240	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0 13.5
String COND SURF I1 L1 L1 NAME BI SIGNATU	Hole Size 26 12.25 8.75 6.125 VE	Casing Size 16 9.625 7 4.5 ERIFY THE FOL MAP PREPARED TATUS OF SURF	0 8630	0 - 80 - 1500 - 8836 6 - 10500 NG ARE AT ENSED SURV	Weigh 65.0 36.0 26.0 13.5 TACHE	Hole, Casing of Grade & The Unknow J-55 ST8 P-110 LT6 P-	LMP4 g, and 0 read n &C &C ATTACI NCE WI	138148 Cement Info Max Mud V 8.7 8.7 10.0 12.5 HMENTS ITH THE UTA FORM	AH OII	Hallibur Halliburtor Halliburtor Halliburtor Halliburtor Halliburtor C AND GAS E DRILLING PI OPERATOR IS PHICAL MAP	Cement No Used ton Light , Type Unin Premium ,	known Jnknown Jnknown Jnknown Jnknown	Sacks 0 200 240 690 160 240	Yield 0.0 3.16 1.36 2.31 1.42	0.0 11.0 14.8 11.0 13.5

BILL BARRETT CORPORATION <u>DRILLING PLAN</u>

FD 2-4-6-19

TRACT 38, NWNE, 661' FNL and 1980' FEL, Section 4, T6S-R19E, SLB&M (surface hole) TRACT 38, NWNE, 661' FNL and 1980' FEL, Section 4, T6S-R19E, SLB&M (bottom hole) Uintah County, Utah

1 - 2. <u>Estimated Tops of Geological Markers and Formations Expected to Contain Water, Oil and Gas and Other Minerals</u>

<u>Formation</u>	Depth – MD/TVD
Green River*	5956'
Mahagony	6891'
TGR3	8128'
Douglas Creek	8291'
Black Shale	8786'
Castle Peak	8981
Uteland Butte	9284'
Wasatch*	9630'
TD	10500°

*PROSPECTIVE PAY

The Wasatch and the Green River are primary objectives for oil/gas.

Base of Useable Water = 5190'

3. BOP and Pressure Containment Data

Depth Intervals	BOP Equipment						
0 – 1500'	Rotating Head or Diverter (may pre-set 9-5/8" with smaller rig)*						
1500' – TD	11" 10000# Double Ram Type BOP (Pipe/Blind)						
	11" 10000# Single Pipe Ram Type BOP						
11" 5000# Annular BOP							
- Drilling spool to a	accommodate choke and kill lines;						
- Ancillary equipme	ent and choke manifold rated at 10,000 psi. All BOP and BOPE tests will be in						
accordance with the	accordance with the requirements of onshore Order No. 2;						
- The BLM and the State of Utah Division of Oil, Gas and Mining will be notified 24 hours in							
advance of all BOP pressure tests.							
- BOP hand wheels	may be underneath the sub-structure of the rig if the drilling rig used is set up						
To operate most e	fficiently in this manner.						

^{*}See Appendix A

4. <u>Casing Program</u>

Hole Size	SETTING	DEPTH	Casing	Casing	Casing		
	(FROM)	(TO)	Size	Weight	Grade	Thread	Condition
26"	Surface	80'	16"	65#			
12 1/4"	Surface	1500'	9 5/8"	36#	J or K 55	ST&C	New
8 3/4"	Surface	8836'	7"	26#	P110	LTC	New
6 1/8"	8636'	TD	4 1/2"	13.5#	P110	LTC	New
			Liner				

Bill Barrett Corporation Drilling Program FD 2-4-6-19 Uintah County, Utah

5. Cementing Program

16" Conductor Casing	Grout				
12-1/4" hole for 9-5/8" Surface	Lead: 200 sx Halliburton Light w/ additives and LCM,				
Casing	11.0 ppg, 3.16 ft3/sx, 100% excess				
(may pre-set with spudder rig)	Tail: 240 sx Halliburton Premium w/ additives and LCM,				
	14.8 ppg, 1.36 ft3/sx, 100% excess				
	Cement to surface, top out as necessary.				
	Lead: 690 sx Tuned Light cement w/ additives mixed at 11				
8-3/4" hole for 7" intermediate	ppg (yield = $2.31 \text{ ft}^3/\text{sx}$).				
casing	Tail: 160 sx Halliburton Econocem w/ additives mixed at				
	13.5 ppg (yield = $1.42 \text{ ft}^3/\text{sx}$). 1000° fill ,				
	Planned TOC @ 1000' 50% excess				
	240 sx Premium w/ additives, 15.6 ppg, (yield = 1.18				
6-1/8" hole for 4-1/2" production	ft3/sx), 1864' fill,				
liner	Planned TOC @ 4.5" liner top, 50% excess				

6. <u>Mud Program</u>

<u>Weight</u>	<u>Viscosity</u>	Fluid Loss	Remarks
Air/Migt/	26 26		Air/Mist/Freshwater Spud Mud
	20 - 30	NC	Fluid System
	26 36	NC	Freshwater Mud Fluid System
1			LSND Fluid System
			LSND FW mud
	Air/Mist/ 8.3 – 8.7 9.2 – 9.4 9.4 – 10.0	Air/Mist/ 26 – 36 8.3 – 8.7 9.2 – 9.4 26 – 36 9.4 – 10.0 42-58	Air/Mist/ 26 – 36 NC 8.3 – 8.7 NC 9.2 – 9.4 26 – 36 NC

Note: Sufficient mud materials to maintain mud properties, control lost circulation and to contain "kicks" will be available at wellsite. BBC may require minor amounts of diesel to be added to its fluid system in order to reduce torque and drag.

7. Testing, Logging and Core Programs

Cores	None anticipated;
Testing	None anticipated; drill stem tests may be run on shows of interest;
Sampling	30' to 50' samples; surface casing to TD. Preserve samples all show intervals;
Surveys	MWD as needed to land wellbore;
Logging	DIL-GR-SP, FDC-CNL-GR-CALIPER-Pe-Microlog, Sonic-GR (all TD to surface).
	FMI & Sonic Scanner to be run at geologist's discretion.

8. <u>Anticipated Abnormal Pressures or Temperatures</u>

No abnormal pressures or temperatures or other hazards are anticipated.

Maximum anticipated bottom hole pressure equals approximately 6825 psi* and maximum anticipated surface pressure equals approximately 4515 psi** (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

^{*}Max Mud Wt x 0.052 x TD = A (bottom hole pressure)

^{**}Maximum surface pressure = A - (0.22 x TD)

Bill Barrett Corporation Drilling Program FD 2-4-6-19 Uintah County, Utah

9. <u>Auxiliary Equipment</u>

- a) Upper kelly cock; lower Kelly cock will be installed while drilling
- b) Inside BOP or stab-in valve (available on rig floor)
- c) Safety valve(s) and subs to fit all string connections in use Mud monitoring will be visually observed

10. Location and Type of Water Supply

Water for the drilling and completion will be from:

43-2505, (t37379): McKinnon Ranch Properties, LC

43-12345 (F78949): Dale Anderson

43-10664 (A38472): W. E. Gene Brown

49-1645 (A35800): RN Industries, Inc.

49-2336 (t78808): RN Industries, Inc.

43-8496 (A53617): A-1 Tank Rental

43-10288 (A65273): Nile Chapman (RNI)

49-2247 (F76893): Magnum Water Service

43-8875 (t38762): Four Star Ranch (c/o David Yeman)

11. <u>Drilling Schedule</u>

Location Construction: DEC 2013

Spud: DEC 2013

Duration: 15 days drilling time 6 days completion time

12. Appendix A

9-5/8" casing may be preset with a spudder rig. If this occurs, the following equipment shall be in place and operational during air/gas drilling:

- Properly lubricated and maintained rotating head
- Spark arresters on engines or water cooled exhaust
- Blooie line discharge 100 feet from well bore and securely anchored
- Straight run on blooie line unless otherwise approved
- Deduster equipment
- All cuttings and circulating medium shall be directed into a reserve or blooie pit
- Float valve above bit
- Automatic igniter or continuous pilot light on the blooie line
- Compressors located in the opposite direction from the blooie line on the rig
- Mud circulating equipment, water, and mud materials (does not have to be premixed) sufficient to maintain the capacity of the hole and circulating tanks or pits

3. PRESSURE CONTROL EQUIPMENT – Schematic Attached

A. Type: Eleven (11) Inch Double Gate Hydraulic BOP with Eleven (11) Inch Annular Preventer. The blow out preventer will be equipped as follows:

- 1. One (1) blind ram (above).
- 2. Two (2) pipe rams (below).
- 3. Drilling spool with two (2) side outlets (choke side 3-inch minimum, kill side 2-inch minimum).
- 4. 3-inch diameter choke line.
- 5. Two (2) maunual and hydraulic choke line valves (3-inch minimum).
- 6. Remote kill line (2-inch minimum).
- 7. Two (2) chokes with one remotely controlled from the rig floor.
- 8. Two (2) kill line valves, and a check valve (2-inch minimum).
- 9. Upper and lower kelly cock valves with handles available.
- 10. Safety valve(s) & subs to fit all drill string connections in use.
- 11. Inside BOP or float sub available.
- 12. Wear ring in casing head.
- 13. Pressure gauge on choke manifold.
- 14. Fill-up line above the uppermost preventer.

B. Pressure Rating: 10,000 psi

C. Testing Procedure:

Annular Preventer

At a minimum, the Annular Preventer will be pressure tested to 50% of the rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum the above pressure test will be performed:

- 1. When the annular preventer is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition, the Annular Preventer will be functionally operated at least weekly.

Blow-Out Preventer

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure

will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the BOP is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

D. Choke Manifold Equipment:

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration.

E. Accumulator:

The accumulator will have sufficient capacity to open the hydraulically-controlled choke line valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psi above precharge on the closing manifold without the use of closing unit pumps. The fluid reservoir capacity will be double the usable fluid volume of the accumulator system capacity and the fluid level of the reservoir will be maintained at the manufacturer's recommendations.

The BOP system will have two (2) independent power sources to close the preventers. Nitrogen bottles (3 minimum) will be one (1) of these independent power sources and will maintain a charge equal to the manufacturer's specifications.

The accumulator precharge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six (6) months thereafter. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum limits specified in the *Onshore Oil & Gas Order Number 2*.

A manual locking device (i.e. hand wheels) or automatic locking device will be installed on all systems of 2M or greater. A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls for all 3M or greater systems will be capable of closing all preventers. Remote controls for 5M or greater systems will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

F. Miscellaneous Information:

The Blow-Out Preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*. The choke manifold and BOP extension rods with hand wheels will be located outside the rig sub-structure. The hydraulic BOP closing unit will be located at least twenty-five (25) feet from the well head but readily accessible to the driller. Exact locations and configurations of the hydraulic BOP closing unit will depend upon the particular rig contracted to drill this hole.

A flare line will be installed after the choke manifold, extending 125 feet (minimum) from the center of the drill hole to a separate flare pit.

COMBIN



Cement Volume Calculations for the: <u>FD 2-4-6-19</u>

Surface Hole:

Hole Data:

Total Depth (MD) = 1,500'

TOC (MD) = 0'

Hole Diameter = 12.250''

Casing OD = 9.625''

Casing ID = 8.921''

Excess = 100%

Cement Data:

Lead Weight = 11.00 lbm/gal Lead Yield = 3.16 ft³/sk Tail Weight = 14.80 lbm/gal Tail Yield = 1.36 ft³/sk

Calculated Data:

Lead Fill = 1000 ft

Lead Volume = 55.8 bbl

Tail Fill = 500 ft

Tail Volume = 27.9 bbl

Proposed Cement Data:

Proposed SX Lead = 200 Proposed SX Tail = 240

Intermediate Hole:

Hole Data:

Total Depth (MD) = 8,836'

TOC (MD) = 1,000'

Hole Diameter = 8.750''

Casing OD = 7.000''

Casing ID = 6.366''

Excess = 50%

Calculated Data:

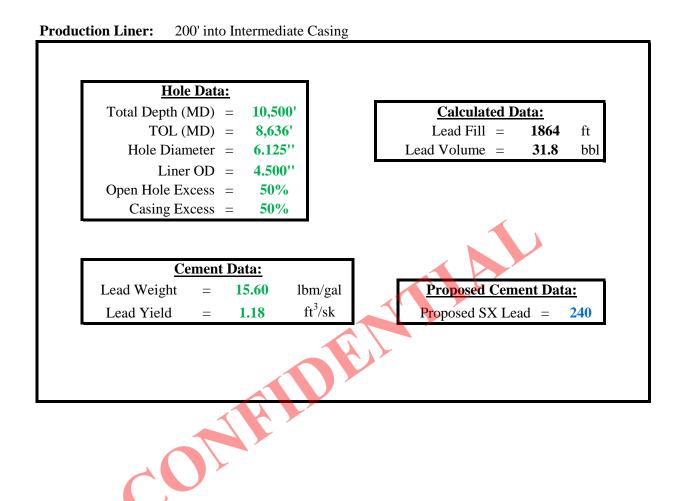
 $\begin{array}{ccccc} Lead \ Fill &=& \mathbf{6836} & \mathrm{ft} \\ Lead \ Volume &=& \mathbf{187.4} & \mathrm{bbl} \\ Tail \ Fill &=& \mathbf{1000} & \mathrm{ft} \\ Tail \ Volume &=& \mathbf{40.2} & \mathrm{bbl} \end{array}$

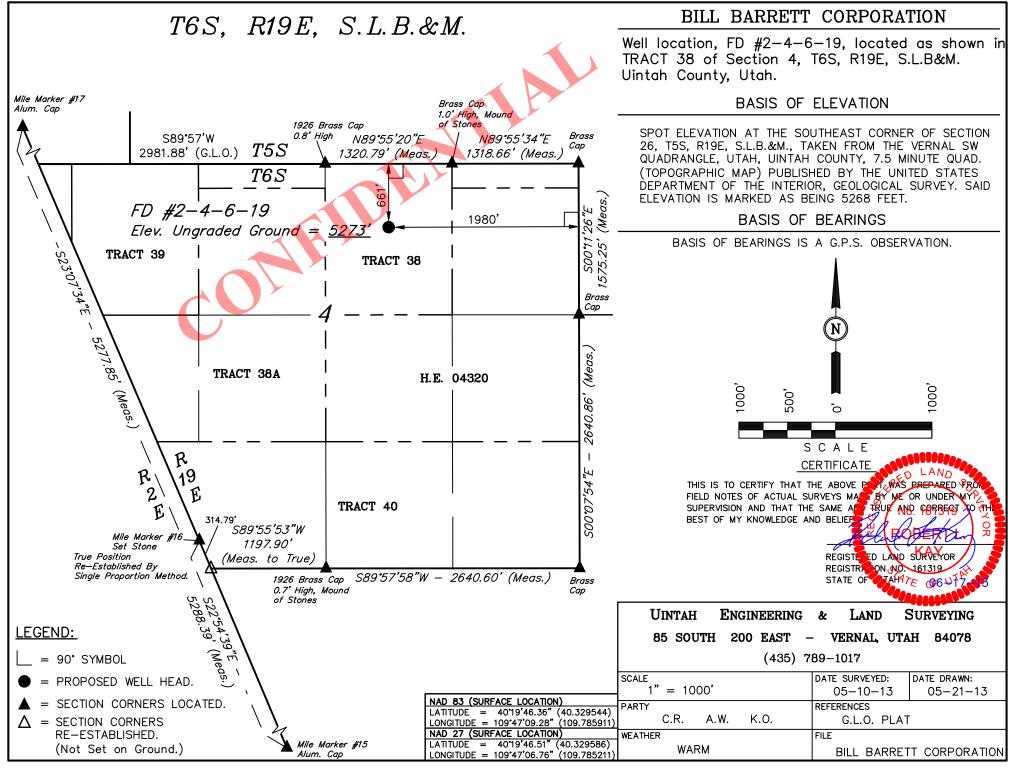
Cement Data:

Lead Weight = 11.00 lbm/gal Lead Yield = 2.31 ft³/sk Tail Weight = 13.50 lbm/gal Tail Yield = 1.42 ft³/sk

Proposed Cement Data:

Proposed SX Lead = 690 Proposed SX Tail = 160





BILL BARRETT CORPORATION

FD #2-4-6-19

LOCATED IN UINTAH COUNTY, UTAH SECTION 4, T6S, R19E, S.L.B.&M.

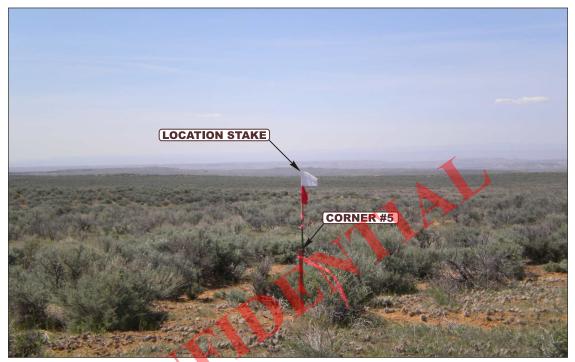


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: SOUTHWESTERLY

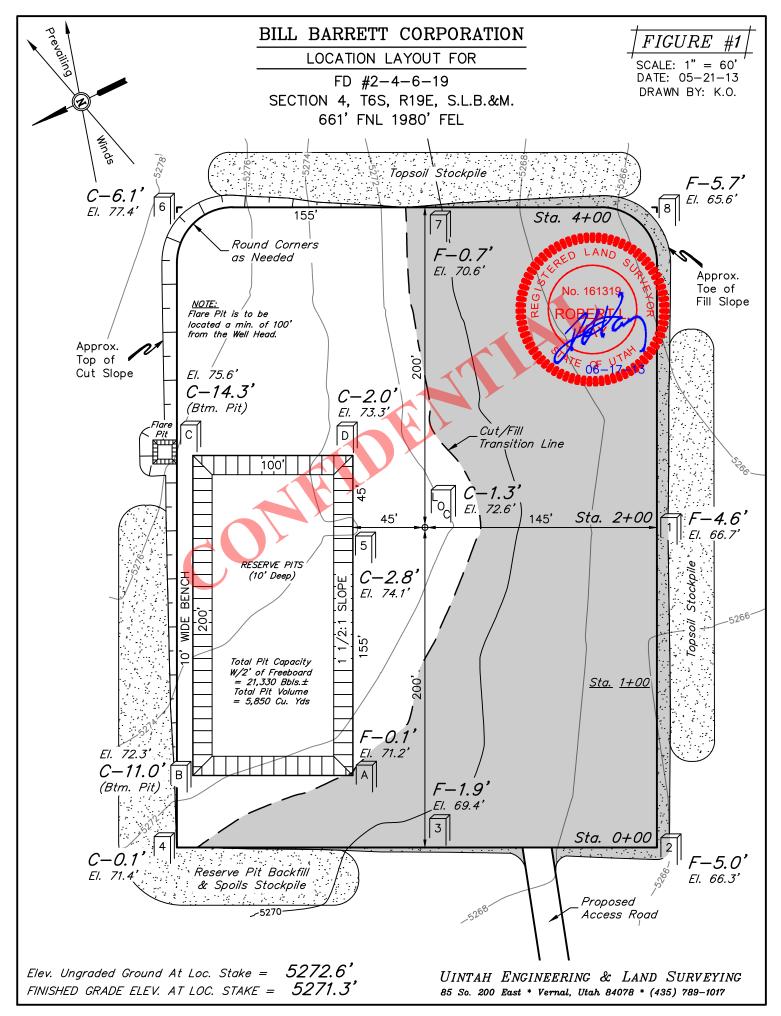


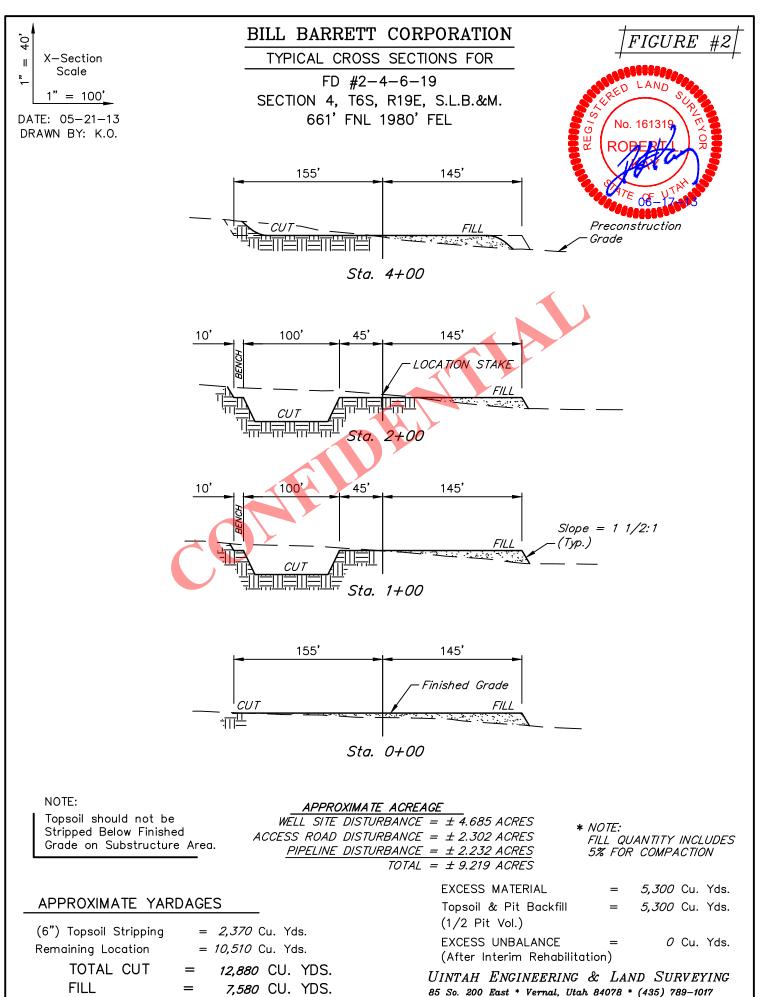
PHOTO: VIEW OF PROPOSED ACCESS

CAMERA ANGLE: NORTHEASTERLY

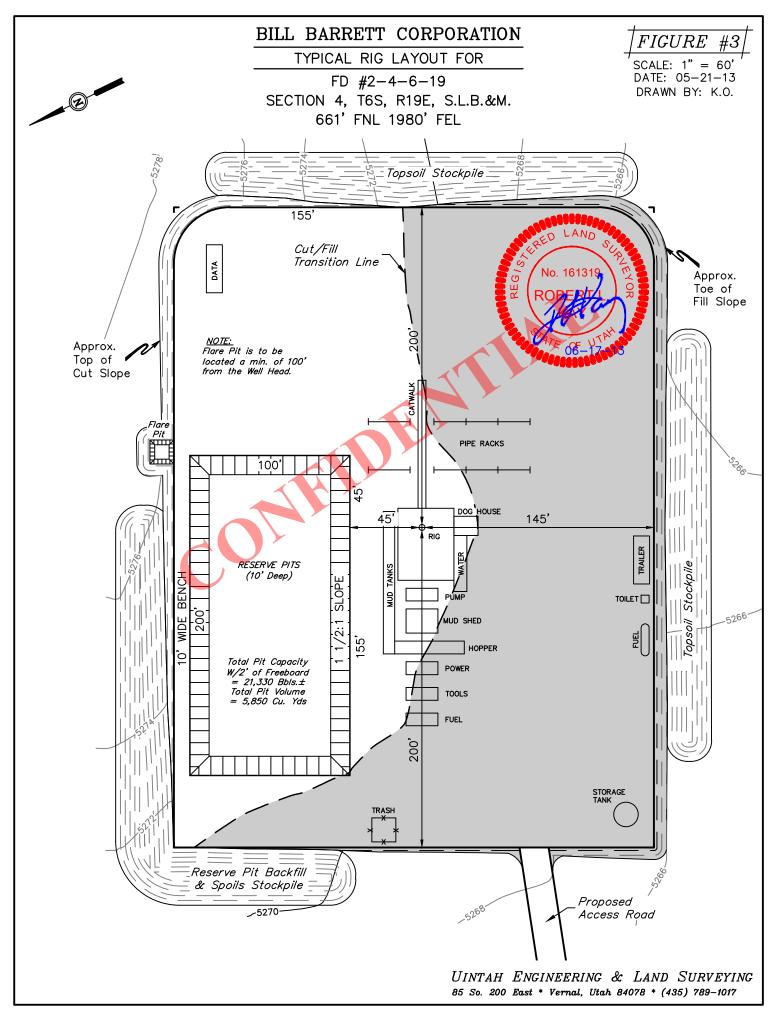








RECEIVED: June 26, 2013

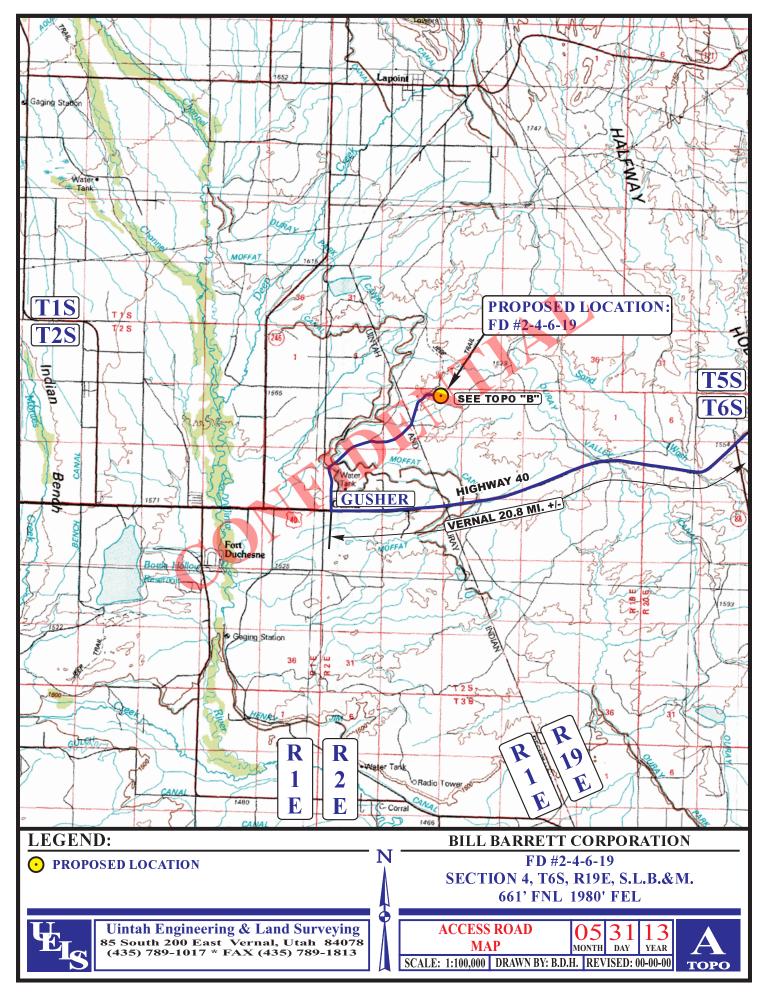


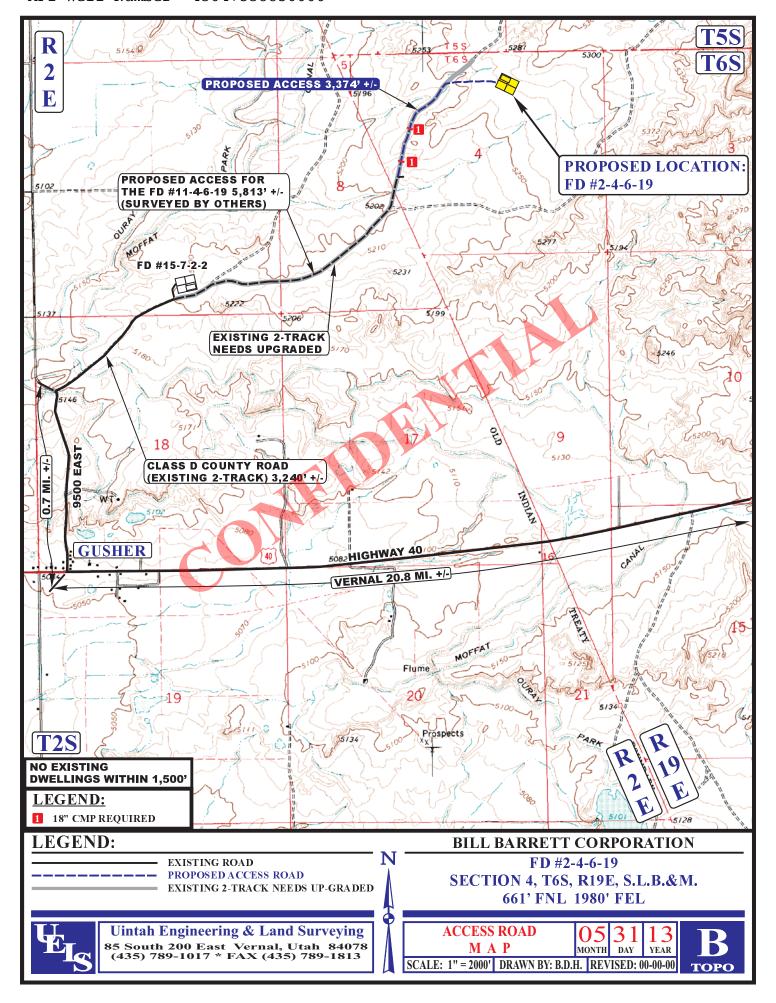
BILL BARRETT CORPORATION

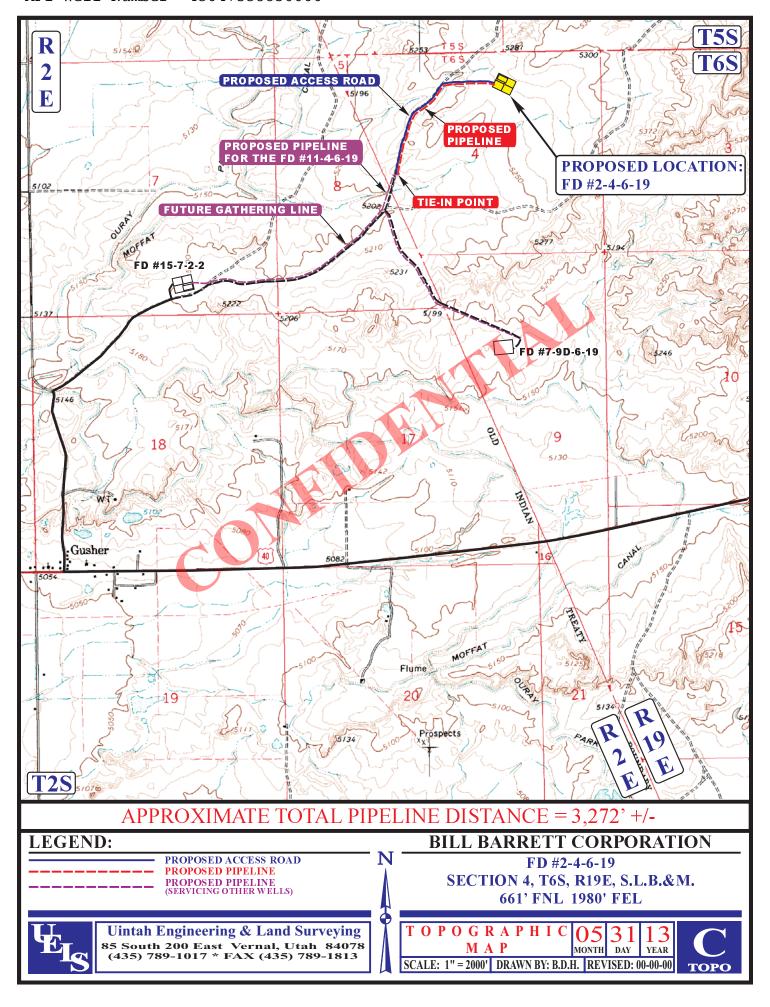
FD #2-4-6-19 SECTION 4, T6S, R19E, S.L.B.&M.

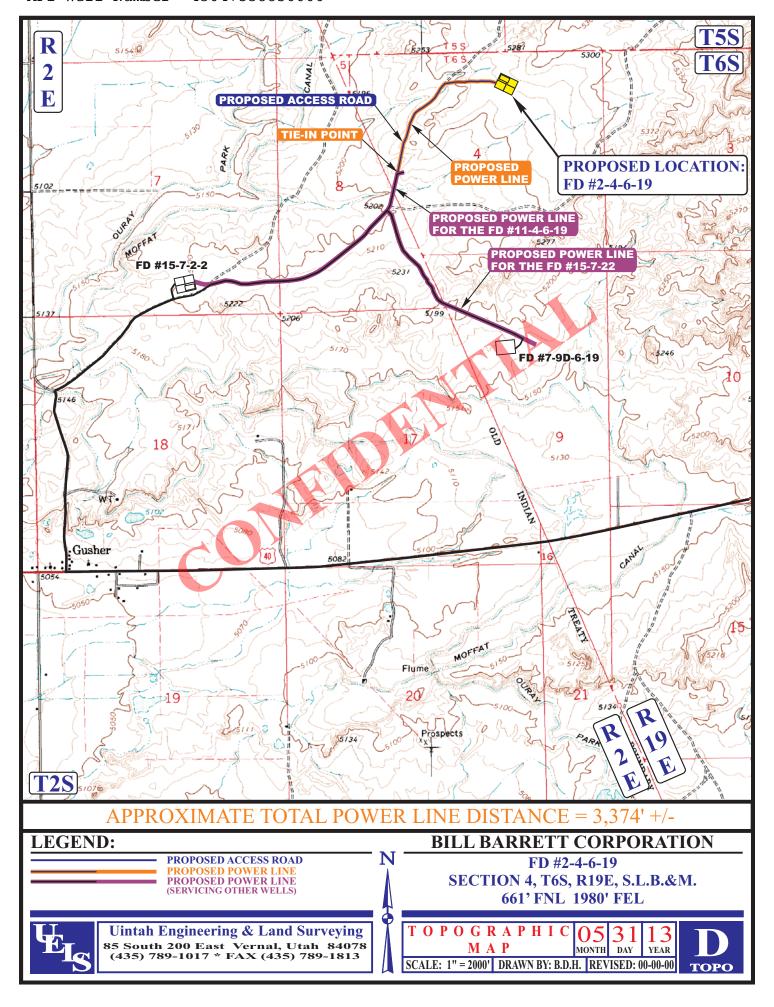
PROCEED IN A WESTERLY, THEN SOUTHWESTERLY, THEN WESTERLY DIRECTION FROM VERNAL, UTAH ALONG HIGHWAY 40 APPROXIMATELY 20.8 MILES TO THE JUNCTION OF THIS ROAD AND 9500 EAST TO THE NORTH; TURN RIGHT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 0.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING CLASS "D" COUNTY ROAD TO THE NORTHEAST; TURN RIGHT AND PROCEED IN A NORTHEASTERLY DIRECTION APPROXIMATELY 3,240" TO THE BEGINNING OF THE PROPOSED ACCESS ROAD FOR THE FD #11-4-6-19 TO THE NORTHEAST; FOLLOW ROAD FLAGS IN A NORTHEASTERLY DIRECTION APPROXIMATELY 5,813" TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE NORTHEAST; FOLLOW ROAD FLAGS IN A NORTHEASTERLY, THEN EASTERLY DIRECTION APPROXIMATELY 3,374" TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 23.9 MILES.









SURFACE USE AGREEMENT

(FD 2-4-6-19)

THIS AGREEMENT Dated June 21, 2013 by and between
Glenn J. Huber, Trustee of the Shirley Huber Family Living Trust executed April 1, 1982 and Shirley
Huber, Trustee of the Glenn J. Huber Family Living Trust executed April 1, 1982
whose address is P O Box 154, Lapoint, UT 84039 (435-247-2336) , hereinafter referred to as "Surface Owners", and
Bill Barrett Corporation and its Subsidiaries , whose address is 1099 18 th Street, #2300, Denver, CO 80202
hereinafter referred to as "Operator".
WITNESSETH:
WHEREAS, Surface Owners represent that they are the owners in fee and in possession of the surface estate for the following described lands in Uintah County, Utah , hereinafter referred to as "Lands", to wit:
A Tract of land lying in tracts 38, 38A and 39, Section 4, Township 6 South, Range 19 East as further described on Exhibit "A" attached hereto and made a part hereof.
WHEREAS, Operator has or will acquire certain leasehold interests in the oil and gas mineral estate in the Lands and proposes to conduct drilling and subsequent production operations on the Lands; and
WHEREAS, Surface Owners are generally aware of the nature of the operations which may be conducted under oil and gas leases covering the mineral estate of the Lands; and
WHEREAS, the parties believe that it is in their mutual best interest to agree to the amount of damages to be assessed incident to the operations of Operator on the premises in the exploration for, development and production of oil, gas and/or other leasehold substances under the terms of those certain oil and gas leases now owned or which may be acquired by Operator covering portions of the mineral estate of the Lands; and,
WHEREAS, the parties believe that a reasonable estimate can be made of the damages which will result from the exploration, development and production operations contemplated by such oil and gas leases.
NOW, THEREFORE, in consideration of ten dollars and other valuable consideration, the sufficiency of which is hereby acknowledged, the parties agree as follows:
1. Operator has the right of ingress and egress and to the use of those portions of the Lands which it requires for oil and gas exploration, development and production operations, including tank batteries and other production facilities and the transportation of produced substances from the leasehold, and also the right to construct and use roads and pipelines across portions of the Lands. Operator shall pay Surface Owners as liquidated damages the following sum as full settlement and satisfaction of all damages growing out of, incident to, or in connection with the usual and customary exploration, drilling, completion, sidetracking, reworking, equipping and production operations, contemplated by the oil and gas leases covering the Lands, unless otherwise specifically provided herein:

the construction of any roads, pipelines, tank battery installations, or installation of any other equipment on the leased premises, Operator shall consult with the surface owners and/or tenant as to the location and direction of same.

- 3. It is the intention of the parties hereto to cause as little interference with farming operations on the leased premises as reasonably possible, including but specifically not limited to the operation of any pivotal irrigation sprinkler system, or any other irrigation method. If any circular irrigation sprinkler system is in use at the time of initial drilling operations on the leased premises, then any subsequent production equipment, including but specifically not limited to pump jacks, hydraulic lifting equipment, or any other equipment necessary to produce any oil or gas from such well, shall be recessed to such depths, or ramps constructed, so as to allow the continued use of such circular irrigation system.
- 4. In the event any well hereunder is plugged and abandoned, Operator agrees that Operator will, within a reasonable time, restore Surface Owner's surface estate as near as practical to its original condition found prior to Operator's operations. It is understood and agreed that Surface Owners may elect in writing, prior to cessation of operations of Operator, to have any road constructed under the terms of this Agreement remain upon the property, in which event Operator agrees to leave such road or roads in reasonable condition.
- 5. Operator is responsible for acquiring all necessary permits, licenses, fees, etc. incident to its operations on the Lands.

- 6. In the event Surface Owners consider that Operator has not complied with all its obligations hereunder, both express and implied, Surface Owners shall notify Operator in writing, setting out specifically in what respects Operator has breached this contract. Operator shall then have sixty (60) days to meet or commence to meet all or any part of the breaches alleged by Surface Owners. The service of said notice shall be precedent to the bringing of any action by Surface Owners for any cause, and no such action shall be brought until the lapse of sixty (60) days after service of such notice on Operator. In the event of litigation, the prevailing party's reasonable attorney's fees will be paid by the opposing party.
- 7. Operator shall be responsible and shall remain liable for any environmental problems on the subject lands which are caused by or through its operations. To the extent that any such claims are asserted, Operator will be responsible for any remediation required as provided by state regulations. This assumption of liability, however, does not include any third-party operations on the subject lands or any Surface Owner actions which could cause environmental problems but is limited solely to the actions of Operator. Operator hereby indemnifies and holds harmless Surface Owners from any and all environmental problems it causes on the Lands.
- 8. In the event Surface Owners own less than the entire fee interest in the Lands, then any payment stated herein shall be proportionately reduced to the interest owned.
- 9. This Agreement shall remain in full force and effect from the date hereof and for so long thereafter as Operator's oil and gas operations affecting the Lands are in effect.
- 10. When the word "Operator" is used in this Agreement, it shall also mean the successors and assigns of Operator, including but not limited to its employees and officers, agents, affiliates, contractors, subcontractors and/or purchasers.
- 11. This Agreement shall be binding upon and inure to the benefit of the heirs, successors and assigns of the parties.

ADDITIONAL PROVISIONS:

SURFACE OWNERS:

By: Glenn J. Huber, Trustee of the Shirley Huber Family Living Trust executed April 1, 1982

By: Shirley Huber, Trustee of the Glenn J. Huber Family Living Trust executed April 1, 1982

STATE of	Utah	ACKNOWLEDGEMENT

COUNTY of Uintah

BEFORE ME, the undersigned, a Notary Public, in and for said County and State, on this

Notary Public
CONNIE J. MALONEY
Commission #653959
My Commission Expires
March 9, 2016
State of Utah

personally appeared Glenn J. Huber and Shirley Huber, in the capacities as stated above

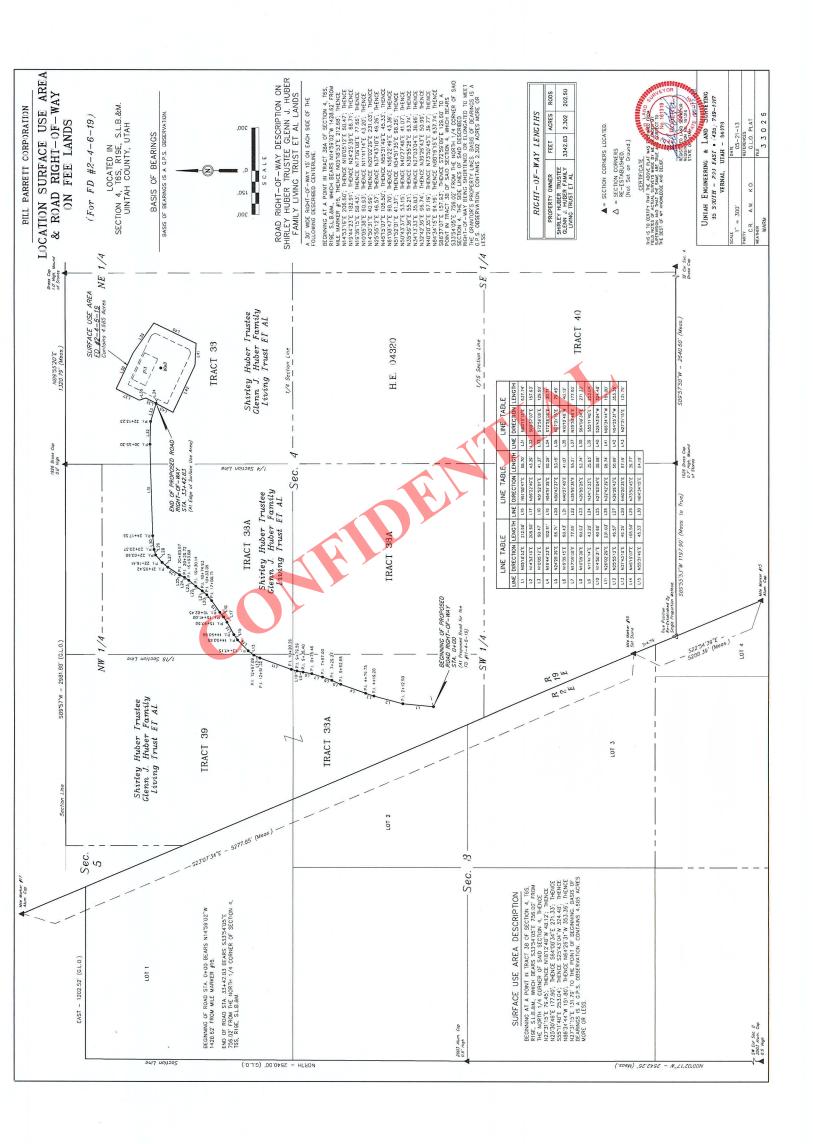
Glenn J. Huber and Shirley Huber, in the capacities as stated above

Identical person(s), described in and who executed the within and foregoing instrument of writing and acknowledged to me that they duly executed same as __their__ free and voluntary act and deed for the uses and purposes therein set forth and in the capacity stated therein.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year last above written.

My Commission Expires:

Notary Public:



PIPELINE RIGHT-OF-WAY AGREEMENT

STATE OF UTAH }
COUNTY OF UINTAH }

THAT, effective on this 21st day of June, 2013,

Glenn J. Huber, Trustee of the Shirley Huber Family Living Trust executed April 1, 1982 and Shirley Huber, Trustee of the Glenn J. Huber Family Living Trust executed April 1, 1982 whose address is: P.O. Box 154, Lapoint, UT 84039

("GRANTORS"), the receipt and sufficiency of which is hereby acknowledged, does hereby grant to Aurora Gathering, LLC of 1099 18th Street, #2300, Denver, CO 80202 ("GRANTEE"), its successors or assigns, a right-of-way to construct, maintain and use pipelines along with the right to alter, inspect, repair, replace, change the size of, operate, and remove pipelines and from time to time add additional pipelines or multiple pipelines, drips, valves, cathodic equipment, and all appurtenances convenient for the maintenance and operation of said lines and for the transportation of oil, gas, produced water, or other substances therein, under, on, over and through the premises hereinafter described, and the Grantee is granted the right of ingress and egress, over and across said lands for any purpose necessary or incidental to the operating and maintaining said pipeline or pipelines owned by Grantee.

The said right-of-way shall be located over and across the following described lands owned by the Grantors in Uintah County, State of Utah, to-wit:

Township 5 South, Range 19 East, SLM

Section 21: A tract of land lying in the E/2SE/4

Section 22: Tracts of land lying in the N/2NE/4, NW/4 and NW/4SW/4

Township 6 South, Range 19 East, SLM

Section 4: A tract of land lying in tracts 38, 38A and 39

As further described on Exhibit "A" attached hereto and made a part hereof.

To have and to hold said easements, rights, and right-of-way unto the said Grantee, its successors and assigns.

Grantee to have the right to select, change or alter the routes of all pipelines herein authorized to be laid under, upon, over and through the above described premises. Grantors shall not place anything over or so close to any pipeline or other facility of Grantee as will be likely to interfere with Grantee's access thereto by use of equipment of means customarily employed in the maintenance of pipelines. Grantee to pay for all damage to growing crops, drainage tile and fences of Grantors arising out of the construction or repair of any of the pipelines and facilities herein authorized to be maintained and operated by Grantee. This easement shall not exceed Thirty (30) feet in width for construction and Twenty five (25) feet for the permanent easement.

agreements or negotiations not set out in writing herein or in the oil and gas lease covering the above described lands. No provisions of this agreement shall be modified, altered or waived except by written amendment executed by the parties or their representatives as set forth below. This agreement shall not act to modify or diminish operator's rights and privileges under any oil and gas leases owned by Operator covering all or any portion of the above described lands.

For the same consideration, the undersigned agree to account to any party who may be entitled to any portion of the aforementioned sum, and to indemnify and hold harmless **Aurora Gathering**, **LLC**, its successors and assigns, from any claim by any other party for damages to the above described lands and the improvements and crops and other things situated thereon.

Grantors shall be held harmless from any claim or demand made on the grounds of damage to property or injury to or death of persons, arising out of Grantee's exercise of the rights herein granted.

This agreement shall terminate within six (6) months after cessation of use by Grantee. Following completion of the pipeline, Grantee agrees to restore the surface of said land as nearly as is reasonably practical to its original condition.

This agreement is signed by Grantors and Grantee as of the date of acknowledgment of their signatures below, but is effective for all purposes as of the Effective Date stated above.

This agreement shall be binding upon the successors and assigns of the parties hereto and shall be deemed to be a covenant running with the lands described above.

IN WITNESS WHEREOF, the GRANTORS and GRANTEE herein named have hereunto set their hand and seal this

2013.

GRANTORS:

Glenn J. Huber, Trustee

of the Shirley Huber Family Living Trust

executed April 1, 1982

GRANTEE:

Aurora Gathering, LLC

Shirley Huber, Trustee of the Glenn J. Huber Family Living Trust

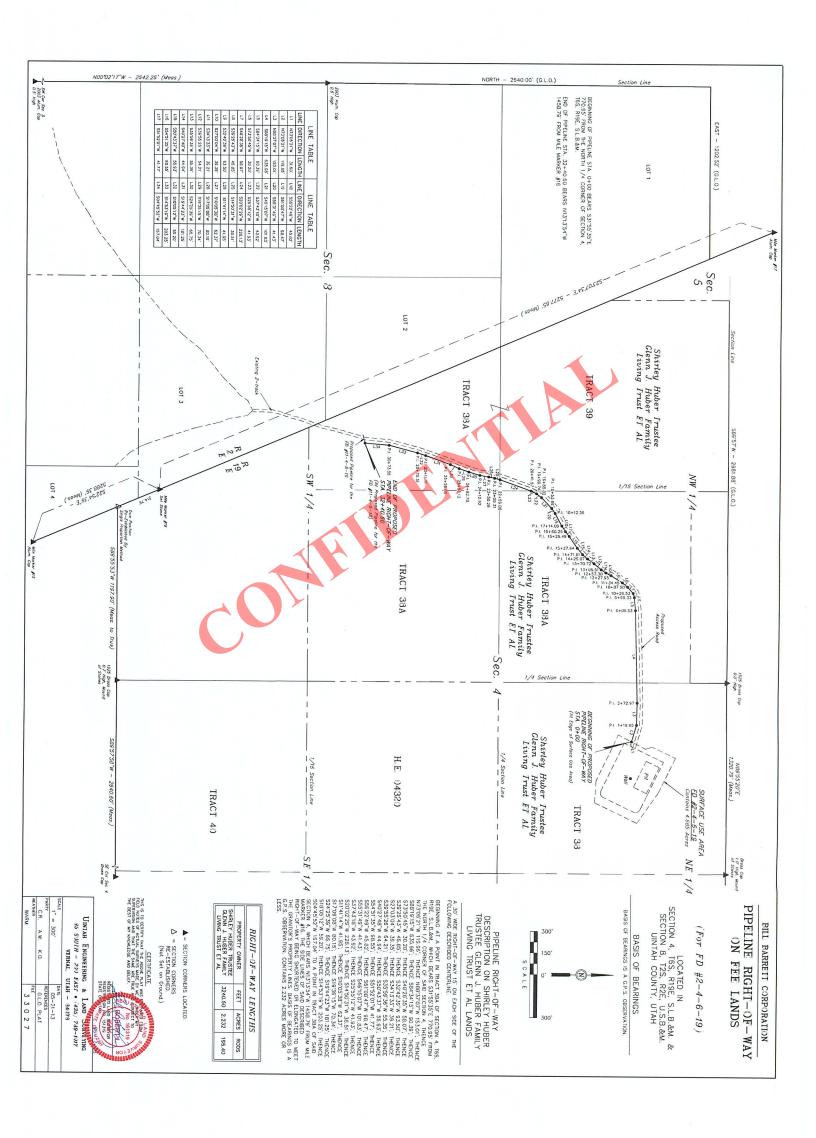
executed April 1, 1982

Steve W. Rawlings, Senior Vice President Operations

2071 0 PRL

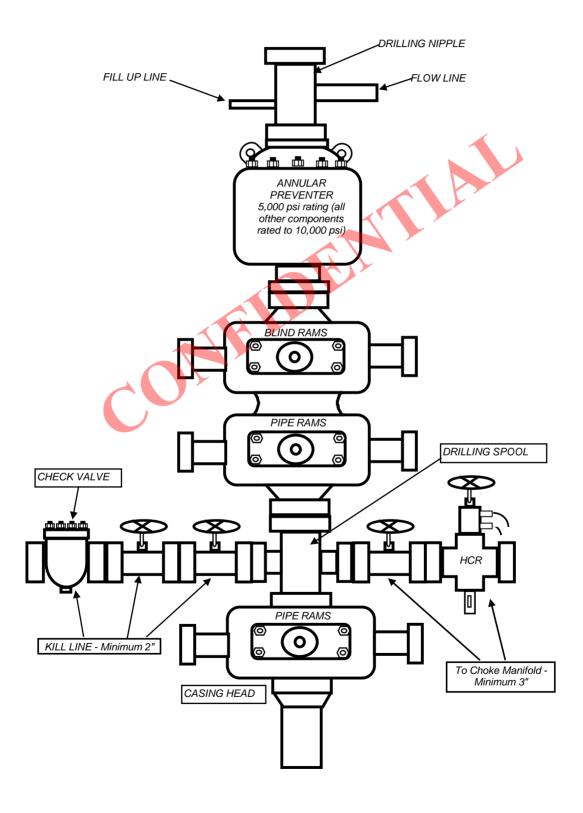
ACKNOWLEDGEMENT

STATE OF }	
COUNTY OF } SS	
Trust executed April 1, 1982 and Shirley Huber, Trust 1982, known to be the identical person(s) who executed the	n and for said County and State, on this
ACKN	OWLEDGEMENT
STATE OF COLORADO CITY & COUNTY OF DENVER SS	
The foregoing instrument was signed by 2013, by Steve W. Corporation, who personally verified to me that said state authorized its use to execute the foregoing instrument on b	. Rawlings, the Senior Vice President Operations of Bill Barrett amp is a true and correct replicate of his/her signature and the he/she
My Commission Expires:	•
J. S.	NOTARY PUBLIC
	Residing at:



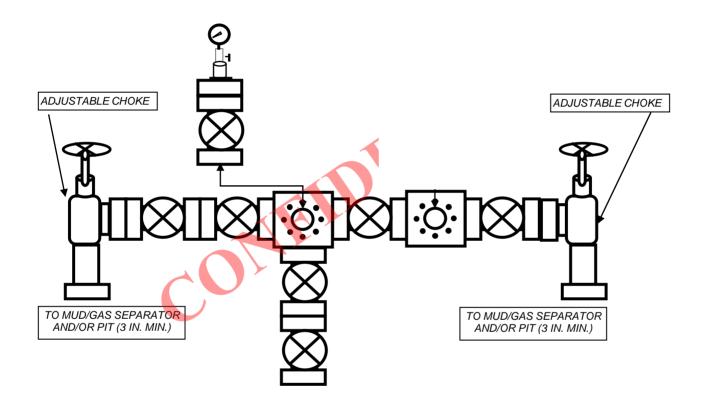
BILL BARRETT CORPORATION

TYPICAL 10,000 p.s.i. BLOWOUT PREVENTER

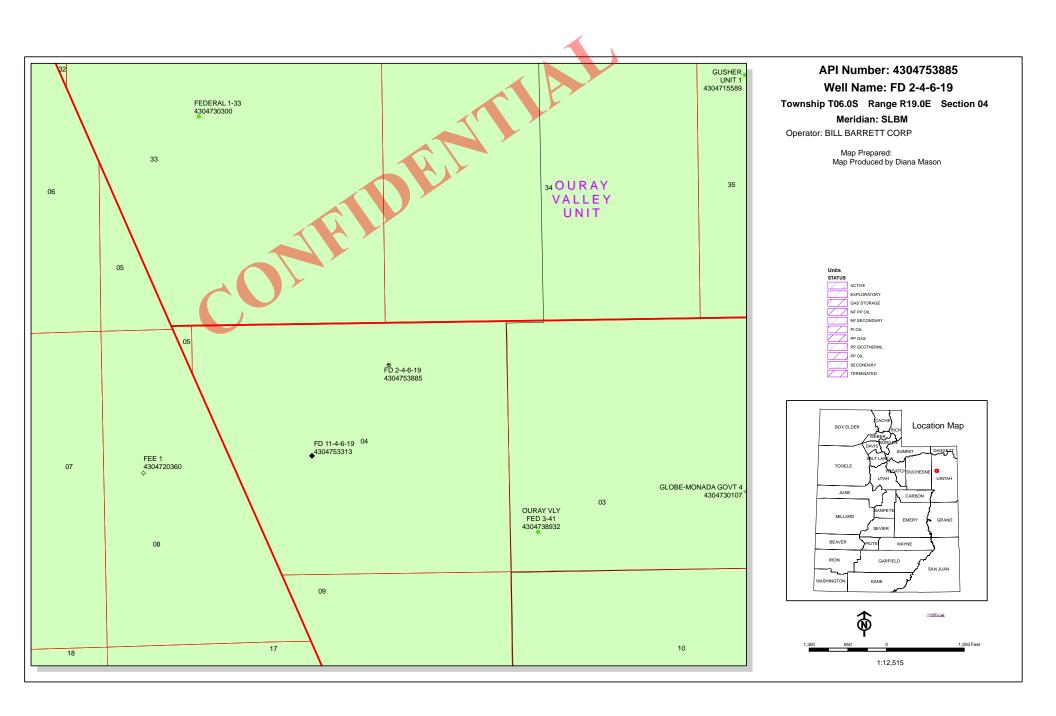


BILL BARRETT CORPORATION

TYPICAL 10,000 p.s.i. CHOKE MANIFOLD



ALL EQUIPMENT IS 3" (MINIMUM).



BOPE REVIEW BILL BARRETT CORP FD 2-4-6-19 43047538850000

Calculations		COND St	ring		16.000 "	
Operators Max Anticipated	6825			12.5		
Casing Internal Yield (psi)		1000	3520	9950	12410	
BOPE Proposed (psi)	0	500	10000	10000		
Max Mud Weight (ppg)	8.7	8.7	10.0	12.5		
Previous Shoe Setting Dept	0	80	1500	8836		
Setting Depth (TVD)	80	1500	8836	10500		
Casing Size(")	16.000	9.625	7.000	4.500		
String		COND	SURF	11	L1	
Well Name	BILL BARRETT CORP FD 2-4-6-19 43047538850000					

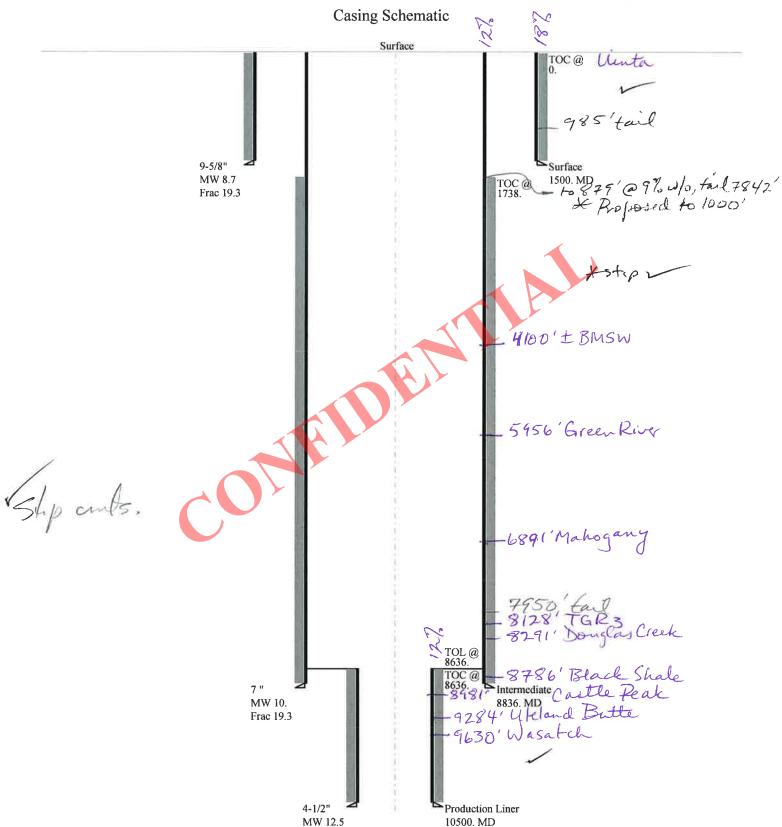
Calculations	COND String	16.000	"
Max BHP (psi)	.052*Setting Depth*MW=	36	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	26	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	18	NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting Depth - Previous Shoe Depth)=	18	NO
Required Casing/BOPE Tes	st Pressure=	80	pși
*Max Pressure Allowed @	Previous Casing Shoe=	0	psi *Assumes 1psi/ft frac gradient

Calculations	SURF String		9.625	"
Max BHP (psi)	.052*Setting Depth*MW=	679		
				BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	499		YES diverter or rotating head
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	349		YES OK
				*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting Depth - Previous Shoe Depth)=	367		NO OK
Required Casing/BOPE Tes	st Pressure=	1500		psi
*Max Pressure Allowed @	Previ <mark>ou</mark> s Casing Shoe=	80		psi *Assumes 1psi/ft frac gradient

Calculations	I1 String	7.000	"
Max BHP (psi)	.052*Setting Depth*MW=	4595	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	3535	YES 10M double ram, 10M single pipe ram,
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	2651	YES 5M annular
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting Depth - Previous Shoe Depth)=	2981	NO OK
Required Casing/BOPE Te	st Pressure=	6965	psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

Calculations	L1 String	4.500	"
Max BHP (psi)	.052*Setting Depth*MW=	6825	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	5565	YES 10M double ram, 10M single pipe ram,
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	4515	YES 5M annular
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting Depth - Previous Shoe Depth)=	6459	YES OK
Required Casing/BOPE Te	st Pressure=	8687	psi
*Max Pressure Allowed @	Previous Casing Shoe=	8836	psi *Assumes 1psi/ft frac gradient

43047538850000 FD 2-4-6-19



Well name:

43047538850000 FD 2-4-6-19

Operator:

BILL BARRETT CORP

Surface

String type:

Design parameters:

Project ID:

43-047-53885

Location:

UINTAH COUNTY

Minimum design factors: **Environment:**

Collapse Collapse:

Mud weight: 8.700 ppg Design is based on evacuated pipe.

Design factor

1.125

H2S considered?

Νo Surface temperature:

74 °F

Bottom hole temperature: Temperature gradient:

95 °F

Minimum section length:

1.40 °F/100ft 100 ft

Burst:

Design factor

1.00

Cement top:

Surface

Burst

Max anticipated surface

No backup mud specified.

pressure: Internal gradient: Calculated BHP

1,320 psi 0.120 psi/ft

1,500 psi

Tension:

8 Round STC:

8 Round LTC: 1.70 (J) **Buttress:** 1.60 (J) Premium:

Tension is based on buoyed weight.

Body yield:

Neutral point:

1,50 (J) 1.50 (B)

1,307 ft

1.80 (J)

Re subsequent strings:

Non-directional string.

Next setting depth: Next mud weight:

8,836 ft 10.000 ppg 4,590 psi

Next setting BHP: Fracture mud wt: Fracture depth: Injection pressure:

19.250 ppg 1,500 ft 1,500 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	1500	9.625	36.00	J-55	ST&C	1500	1500	8.796	13037
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	678	2020	2.980	1500	3520	2.35	47	394	8.37 J

Prepared

Helen Sadik-Macdonald

Div of Oil, Gas & Mining by:

Phone: 801 538-5357

FAX: 801-359-3940

Date: August 26,2013 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 1500 ft, a mud weight of 8.7 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:

43047538850000 FD 2-4-6-19

Operator:

BILL BARRETT CORP

String type:

Intermediate

Project ID:

43-047-53885

Location:

UINTAH COUNTY

Environment:

Design parameters: **Collapse**

Mud weight:

Design is based on evacuated pipe.

10.000 ppg

Collapse:

Design factor

1.125

H2S considered? Surface temperature:

No 74 °F

Minimum design factors:

Bottom hole temperature:

198 °F

Temperature gradient: Minimum section length: 1.40 °F/100ft

88 ft

Burst:

Design factor

1.00

1.80 (J)

1.80 (J)

1.60 (J)

Cement top:

1,738 ft

Burst

Max anticipated surface

No backup mud specified.

pressure: Internal gradient:

4,508 psi 0.220 psi/ft

Calculated BHP 6,452 psi **Tension:**

8 Round STC:

8 Round LTC:

Premium:

Body yield:

Buttress:

1,50 (J) 1.60 (B)

Tension is based on air weight. Neutral point: 7,503 ft Non-directional string.

Re subsequent strings:

Next setting depth: Next mud weight:

10,500 ft 12.500 ppg 6,818 psi

Next setting BHP: Fracture mud wt: Fracture depth: Injection pressure:

19.250 ppg 8,836 ft 8,836 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	8836	1	26.00	P-110	LT&C	8836	8836	6.151	91850
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension
Seq	Load	Strength	Design	Load	Strength	Design	Load	Strength	Design
_	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(kips)	(kips)	Factor
1	4590	6230	1.357	6452	9950	1.54	229.7	693	3.02 J

Prepared

Helen Sadik-Macdonald

Div of Oil, Gas & Mining by:

Phone: 801 538-5357 FAX: 801-359-3940

Date: August 26,2013 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8836 ft, a mud weight of 10 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

43047538850000 FD 2-4-6-19 Well name:

BILL BARRETT CORP Operator:

Production Liner String type:

Project ID: 43-047-53885

UINTAH COUNTY Location:

Design parameters: Minimum design factors: **Environment:** H2S considered?

Collapse Collapse:

Mud weight: Design factor 12.500 ppg

Design is based on evacuated pipe.

74 °F 1.125 Surface temperature: 221 °F Bottom hole temperature:

Temperature gradient: 1.40 °F/100ft

No

8,636 ft

8,636 ft

Minimum section length: 1,000 ft

Liner top:

Non-directional string.

Burst:

1.00 Design factor Cement top:

Burst

Max anticipated surface pressure: 4,508 psi

Internal gradient: 0.220 psi/ft **Tension:** Calculated BHP 8 Round STC: 1.80 (J) 6,818 psi

8 Round LTC: 1.80 (J) No backup mud specified. Buttress: 1.60 (J) Premium: 1.50 (J)

Body yield: 1.60 (B)

> Tension is based on air weight. Neutral point: 10,149 ft

Run	Segment		Nominal		End	True Vert	Measured	Drift	Est.	
Seq	Length	Size	Weight	Grade	Finish	Depth	Depth	Diameter	Cost	
	(ft)	(in) _	(lbs/ft)			(ft)	(ft)	(in)	(\$)	
1	1900	4.5	13.50	P-110	LT&C	10500	10500	3.795	10646	
		,								
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension	
Seq	Load	Strength	Design	Load	Strength	Design	Load	Strength	Design	
-	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(kips)	(kips)	Factor	
1	6818	10680	1.566	6818	12410	1.82	25.6	338	13.18 J	

Helen Sadik-Macdonald Prepared Div of Oil, Gas & Mining by:

Phone: 801 538-5357 FAX: 801-359-3940

Date: August 26,2013 Salt Lake City, Utah

For this liner string, the top is rounded to the nearest 100 ft.Collapse is based on a vertical depth of 10500 ft, a mud weight of 12.5 ppg. The Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator BILL BARRETT CORP

Well Name FD 2-4-6-19

API Number 43047538850000 APD No 8229 Field/Unit MOFFAT CANAL

Location: 1/4,1/4 NWNE Sec 4 Tw 6.0S Rng 19.0E 661 FNL 1980 FEL

GPS Coord (UTM) 603137 4465040 Surface Owner GLENN AND SHIRLEY HUBER

Participants

Trevor Anderson (surveyor), Kary Eldredge and Jake Woodland (BBC), Jennifer Hall (landman), Jim Burns and Don Hamilton (permit contractor)

Regional/Local Setting & Topography

This proposed site is on a flat sage brush plain approximately 2 miles north east of Gusher Utah. Drainage is gradual toward the south.

Y

Surface Use Plan

Current Surface Use

Wildlfe Habitat

New Road Miles Well Pad

0.6 Width 300 Length 400

Src Const Material Surface Formation

Offsite UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Sage, rabbit brush, prickly pear, desert grasses, horse brush

Soil Type and Characteristics

sandy loam

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

RECEIVED: September 11, 2013

Paleo Survey Run? N Paleo Potental Observed? N Cultural Survey Run? N Cultural Resources? N

Reserve Pit

Site-Specific Factors	Site Ran	king	
Distance to Groundwater (feet)	100 to 200	5	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)	>1320	0	
Native Soil Type	High permeability	20	
Fluid Type	TDS>10000	15	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	40	1 Sensitivity Level

Characteristics / Requirements

The reserve pit is proposed in a cut stable location. Dimensions are 200 x 100 x 10ft. Bill Barrett representative Kary Eldredge stated that a 20 mil reserve pit liner and felt subliner are used on all BBC locations as standard equipment. This liner program appears adequate for this location.

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 16 Pit Underlayment Required? Y

Other Observations / Comments

Richard Powell 8/7/2013
Evaluator Date / Time

Application for Permit to Drill Statement of Basis

Utah Division of Oil, Gas and Mining

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
8229	43047538850000	LOCKED	OW	P	No
Operator	BILL BARRETT CORP		Surface Owner-APD	GLENN AND SH HUBER	IRLEY
Well Name	FD 2-4-6-19		Unit		

Field MOFFAT CANAL Type of Work **DRILL**

NWNE 4 6S 19E S 661 FNL 1980 FEL **GPS** Coord Location

(UTM) 603134E 4465028N

Geologic Statement of Basis

Bill Barrett proposes to set 80 feet of conductor and 1,500 feet of surface casing at this location. The entire surface hole will be drilled with fresh water mud. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 4,100'. A search of Division of Water Rights records shows 3 water wells within a 10,000 foot radius of the center of Section 4. These wells range in depth from 225-300 feet. Listed uses are domestic, irrigation and stock watering. The wells probably produce water from the Uinta Formation. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought up to or above the base of the moderately saline ground water in order to isolate it from fresher waters uphole.

> Brad Hill 8/22/2013 APD Evaluator Date / Time

Surface Statement of Basis

This proposed well site is on fee surface with fee minerals. Surface owners Glenn and Shirley Huber were invited to attend this onsite inspection but chose not to attend. Mr. and Mrs. Huber voiced no opposition to drilling at this site. This site is generally flat with a gradual south slope. No drainages appear to be effected by this proposed location. Bill Barrett Corp. representative Kary Eldredge stated that a 20 mil reserve pit liner will be used. This liner program appears adequate for this site. Due to very permeable soil, this well pad should be bermed to keep fluids from leaving the pad. This appears to be a good site for placement of this well.

> Richard Powell 8/7/2013 Date / Time **Onsite Evaluator**

Conditions of Approval / Application for Permit to Drill

Category Condition

Pits A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed

and maintained in the reserve pit.

The well site shall be bermed to prevent fluids from leaving the pad. Surface

Surface Drainages adjacent to the proposed pad shall be diverted around the location.

RECEIVED: September 11, 2013

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 6/26/2013 API NO. ASSIGNED: 43047538850000

WELL NAME: FD 2-4-6-19

OPERATOR: BILL BARRETT CORP (N2165) **PHONE NUMBER:** 303 312-8115

CONTACT: Brady Riley

PROPOSED LOCATION: NWNE 04 060S 190E Permit Tech Review:

> **SURFACE:** 0661 FNL 1980 FEL **Engineering Review:**

> BOTTOM: 0661 FNL 1980 FEL Geology Review:

COUNTY: UINTAH LATITUDE: 40.32942

UTM SURF EASTINGS: 603134.00 NORTHINGS: 4465028.00

FIELD NAME: MOFFAT CANAL LEASE TYPE: 4 - Fee

LEASE NUMBER: fee PROPOSED PRODUCING FORMATION(S): GREEN RIVER(LWR)-WASATCH

Drilling Unit

SURFACE OWNER: 4 - Fee **COALBED METHANE: NO**

Unit:

RECEIVED AND/OR REVIEWED:

Oil Shale 190-5

Oil Shale 190-13

Bond: STATE - LMP4138148

LOCATION AND SITING: R649-2-3. ✓ PLAT

Potash R649-3-2. General

Oil Shale 190-3 R649-3-3. Exception

Board Cause No: Cause 139-42

Water Permit: 49-1645

Effective Date: 4/12/1985 **RDCC Review:**

Siting: 660' Fr Ext U Bdry & 1320' Fr Other Wells **Fee Surface Agreement**

Intent to Commingle R649-3-11. Directional Drill

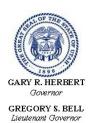
Commingling Approved

Presite Completed Comments: IRR SEC:

Stipulations: 5 - Statement of Basis - bhill

10 - Cement Ground Water - hmacdonald 12 - Cement Volume (3) - hmacdonald 25 - Surface Casing - hmacdonald

LONGITUDE: -109.78593



State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: FD 2-4-6-19 API Well Number: 43047538850000

Lease Number: fee

Surface Owner: FEE (PRIVATE) **Approval Date:** 9/11/2013

Issued to:

BILL BARRETT CORP, 1099 18th Street Ste 2300, Denver, CO 80202

Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 139-42. The expected producing formation or pool is the GREEN RIVER(LWR)-WASATCH Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

The 7" casing string cement shall be brought back to ± 1000 ' to isolate base of moderately saline ground water.

Cement volume for the 4 1/2 production string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back to TOL MD as indicated in the submitted drilling plan.

Surface casing shall be cemented to the surface.

Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this

well:

- Any changes to the approved drilling plan contact Dustin Doucet
- Significant plug back of the well contact Dustin Doucet
- Plug and abandonment of the well contact Dustin Doucet

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well - contact Carol Daniels OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to cementing or testing casing contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program
 - contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well contact Dan Jarvis

Contact Information:

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 office
- Dustin Doucet 801-538-5281 office

801-733-0983 - after office hours

• Dan Jarvis 801-538-5338 - office

801-231-8956 - after office hours

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
 - Requests to Change Plans (Form 9) due prior to implementation
 - Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
 - Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Annuavad Dw.

Approveu by:

For John Rogers Associate Director, Oil & Gas Sundry Number: 54533 API Well Number: 43047538850000

	STATE OF UTAH	D050			FORM 9
1	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND M	5.LEASE fee	DESIGNATION AND SERIAL NUMBER:		
SUNDR	Y NOTICES AND REPORTS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	7.UNIT o	r CA AGREEMENT NAME:			
1. TYPE OF WELL Oil Well				8. WELL FD 2-4	NAME and NUMBER: 4-6-19
2. NAME OF OPERATOR: BILL BARRETT CORP				9. API NI 43047	JMBER: 538850000
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300	, Denver, CO, 80202		NE NUMBER: 312-8134 Ext		and POOL or WILDCAT: T CANAL
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0661 FNL 1980 FEL				COUNTY	
QTR/QTR, SECTION, TOWNSH	IIP, RANGE, MERIDIAN: 04 Township: 06.0S Range: 19.0E Me	eridian:	S	STATE: UTAH	
11. CHECI	K APPROPRIATE BOXES TO INDIC	ATE N	ATURE OF NOTICE, REPOR	T, OR C	THER DATA
TYPE OF SUBMISSION			TYPE OF ACTION		
1	ACIDIZE		ALTER CASING		CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING		CHANGE WELL NAME
9/11/2015	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS		CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ F	FRACTURE TREAT		NEW CONSTRUCTION
Date of Work Completion.	OPERATOR CHANGE	F	PLUG AND ABANDON		PLUG BACK
	PRODUCTION START OR RESUME	☐ F	RECLAMATION OF WELL SITE		RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL		TEMPORARY ABANDON
	TUBING REPAIR		/ENT OR FLARE		WATER DISPOSAL
DRILLING REPORT	WATER SHUTOFF		SI TA STATUS EXTENSION	1	APD EXTENSION
Report Date:	WILDCAT WELL DETERMINATION		OTHER	отні	ER:
12. DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly sho	w all pe	rtinent details including dates, d	lepths, vo	lumes, etc.
	sts a one year extension for				Approved by the
				0	Մես ցանւմ։8օր20f4 iii, Gas and Mining
					ii, cas ana riiiing
				Date:	1932 00 4
				Ву:	Postin
NAME (PLEASE PRINT)	PHONE NUM	/BER	TITLE		
Christina Hirtler	303 312-8597		Administrative Assistant		
SIGNATURE N/A			DATE 8/15/2014		

Sundry Number: 54533 API Well Number: 43047538850000



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047538850000

API: 43047538850000 Well Name: FD 2-4-6-19

Location: 0661 FNL 1980 FEL QTR NWNE SEC 04 TWNP 060S RNG 190E MER S

Company Permit Issued to: BILL BARRETT CORP

Date Original Permit Issued: 9/11/2013

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

• If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes No
 Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes No
 Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes No
• Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? Yes No
• Has the approved source of water for drilling changed? Yes No
 Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes No
• Is bonding still in place, which covers this proposed well? Yes No
nature: Christina Hirtler Date: 8/15/2014

Title: Administrative Assistant Representing: BILL BARRETT CORP

Sundry Number: 65080 API Well Number: 43047538850000

	STATE OF UTAH		FORM 9	
ı	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	6	5.LEASE DESIGNATION AND SERIAL NUMBER: fee	
SUNDR	Y NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
	posals to drill new wells, significantly deep reenter plugged wells, or to drill horizontal l n for such proposals.		7.UNIT or CA AGREEMENT NAME:	
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: FD 2-4-6-19	
2. NAME OF OPERATOR: BILL BARRETT CORP			9. API NUMBER: 43047538850000	
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300		NE NUMBER: 312-8134 Ext	9. FIELD and POOL or WILDCAT: MOFFAT CANAL	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0661 FNL 1980 FEL			COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSH	HP, RANGE, MERIDIAN: 04 Township: 06.0S Range: 19.0E Meridian:	S	STATE: UTAH	
11. CHECI	K APPROPRIATE BOXES TO INDICATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA	
TYPE OF SUBMISSION		TYPE OF ACTION		
	ACIDIZE	ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME	
9/11/2016	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE	
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION	
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK	
		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION	
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON	
		/ENT OR FLARE	WATER DISPOSAL	
DRILLING REPORT		SI TA STATUS EXTENSION	✓ APD EXTENSION	
Report Date:		STA STATUS EXTENSION	OTHER	
	WILDCAT WELL DETERMINATION	OTHER	OTHER:	
	COMPLETED OPERATIONS. Clearly show all pe quest a one year extension for th		lepths, volumes, etc. Approved by the	
BBC flereby fed	9/11/2016	iis APD tillough	Utabusiv040r20f5	
	371172313		Oil, Gas and Mining	
			Date:	
			00 ru 00	
			By:	
NAME (PLEASE PRINT) Brady Riley	PHONE NUMBER 303 312-8115	TITLE Permit Analyst		
SIGNATURE		DATE		
N/A		8/3/2015		

Sundry Number: 65080 API Well Number: 43047538850000



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

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 Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes No
• Is bonding still in place, which covers this proposed well? Yes No
nature: Brady Riley Date: 8/3/2015

Sig

Title: Permit Analyst Representing: BILL BARRETT CORP



State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER

Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA

Division Director

September 13, 2016

Bill Barrett 1099 18th Street, Suite 2300 Denver, CO 80202

Re:

APD Rescinded - FD 2-4-6-19, Sec. 4, T. 6S, R. 19E

Uintah County, Utah API No. 43-047-53885

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on September 11, 2013. On August 18, 2014 and August 4, 2015 the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective September 13, 2016.

A new APD must be filed with this office for approval <u>prior</u> to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Viana Thacor

Environmental Scientist

cc: Well File

Brad Hill, Technical Service Manager

